

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A lithographic projection apparatus, comprising:
a radiation system configured to provide a ~~projection~~ beam of radiation;
a support configured to support a patterning device, the patterning device configured to pattern the ~~projection~~ beam according to a desired pattern;
a substrate table configured to hold a substrate; and
a projection system configured to project the patterned beam onto a target portion of the substrate, wherein a space in the apparatus comprises a composition containing at least one of (a) and (b), wherein (a) is one or more perhalogenated C₁-C₆ alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen and halogen, wherein the apparatus contains the composition.
2. (Original) An apparatus according to claim 1, wherein the composition further contains at least one of:
(c) N₂;
(d) H₂; and
(e) one or more inert gases.
3. (Canceled)
4. (Original) An apparatus according to claim 1, wherein the one or more alkanes includes tetrafluoromethane.
5. (Original) An apparatus according to claim 1, wherein the one or more compounds includes one or more nitrogen hydrides.
6. (Original) An apparatus according to claim 1, wherein the one or more compounds includes at least one of ammonia, diazene, hydrazine and salts thereof.

7. (Original) An apparatus according to claim 1, wherein the one or more compounds includes nitric acid.
8. (Original) An apparatus according to claim 1, wherein the composition further contains at least one of:
 - (c) N₂; and
 - (d) H₂.
9. (Original) An apparatus according to claim 1, wherein the one or more compounds includes nitrogen dioxide.
10. (Original) An apparatus according to claim 1, wherein the composition further contains at least one of:
 - (c) oxygen;
 - (d) hydrogen; and
 - (e) water.
11. (Currently amended) An apparatus according to claim 1, wherein the ~~projection~~ beam passes through the space.
12. (Original) An apparatus according to claim 1, wherein the space comprises at least a part of the radiation system, or at least a part of the projection system, or at least a part of the radiation system and the projection system.
13. (Original) An apparatus according to claim 1, further comprising an activation device configured to produce reactive species of the composition.
14. (Original) An apparatus according to claim 13, wherein the activation device produces the reactive species by at least one of exciting and dissociating molecules of at least one of the alkanes and the one or more compounds.

15. (Original) An apparatus according to claim 13, wherein the activation device is one of a DUV source, an EUV source, a plasma source, an electrical field, a magnetic field, or an electron source.

16. (Original) An apparatus according to claim 13, wherein the activation device includes the radiation system.

17. (Original) An apparatus according to claim 1, wherein the composition is a gas, a solid, a liquid, or a beam of molecules.

18. (Original) An apparatus according to claim 1, wherein the composition is encapsulated in a microporous media.

19. (Currently amended) A device manufacturing method, comprising:
~~providing a substrate that is at least partially covered by a layer of radiation-sensitive material;~~

providing a ~~projection~~ beam of radiation using a radiation system;

patterning the beam;

projecting ~~[[a]]~~ the patterned beam of radiation onto a target portion of ~~[[the]]~~ a layer of radiation-sensitive material at least partially covering a substrate; and

producing reactive species of ~~[[the]]~~ a composition, wherein a space through which the ~~projection~~ beam passes comprises ~~[[a]]~~ the composition containing at least one of (a) and (b), wherein (a) is one or more perhalogenated C₁-C₆ alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen and halogen, wherein the space contains at least a portion of the radiation system.

20. (Original) A method according to claim 19, wherein producing the reactive species includes at least one of the exciting and dissociating molecules of at least one of the alkanes and the one or more compounds.